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This study assesses the effects of Head Start and other preschool programs on five life success measures in a U.S. cohort of youth (N = 5,621). The life success indices are average annual income-to-poverty ratios, economic mobility, and number of years the youth lived in families whose incomes fell below official poverty thresholds, received Food Stamps, and received TANF/AFDC. Controlling for a variety of background and other factors in separate regression models for each life success measure, results show that youth who participated in preschool programs other than Head Start had higher average annual income-to-poverty ratios than non-preschoolers. Bivariate findings corroborate previous research indicating that Head Starters are economically and behaviorally disadvantaged compared to both other preschool and non-preschool children. Multivariate findings of this study also show that Head Starters do as well as non-preschoolers in regard to the four other life success measures. In essence, on these measures Head Starters become mainstreamed by the time they enter the labor force, start their own families, and form their own households, such that they fare no better or worse than other preschoolers and non-preschoolers in regard to economic mobility, years lived in poor families, and receipt of Food Stamps and TANF/AFDC. Findings support continued funding of Head Start but also suggest that higher levels of funding may be necessary to raise family incomes above poverty comparable to other preschool programs.

This study examines long-term effects of preschool intervention programs on a U.S. cohort of youth. Controlling for a variety of background, early childhood, sociodemographic, human capital, structural, and other factors, the author seeks to determine how those who participated in Head Start and other preschool

programs fared in regard to economic well-being compared to those who had no preschool experience. The study uses data from the 1979 Cohort of the National Longitudinal Survey of Youth (NLSY79).

Over the past several decades, scholars and others have devoted much attention to Head Start and other preschool interventions like the Perry Preschool Project and the Abecedarian Project. The related literature is extensive and sufficiently covered elsewhere (e.g., Children's Defense Fund, 1992; Grimmet & Garrett, 1989; McKey, et al., 1985; Washington & Oyemade, 1987; Zigler & Muenchow, 1992; Zigler & Valentine, 1979). Caputo (1998) notes that the literature is mixed in regard to Head Start's enabling poor families to break the cycle of disadvantage and his study of the children of NLSY79 mothers shows that Head Start children spend more time in persistent poverty than other children from poor families and benefit from behavioral and emotional adjustments. In an earlier NLSY79 study, Mott and Quinlan (1991) report short-term cognitive gains, but possible negative effects on emotional development. Currie and Thomas (1995), also relying on the NLSY79, report that the short-term cognitive gains among both whites and blacks were quickly lost among blacks.

In a more recent meta-analysis of 35 studies published between 1990 and 2000 that assessed short- and long-term benefits of preschool programs, Gorey (2001) finds large positive effects on standardized measures of academic achievement and intelligence, lasting even after 5 to 10 years, and substantial lessening of personal and social problems measured by cumulative indices over a 10- to 25-year period for those who had attended preschool (e.g., school drop out, welfare dependence, unemployment, and poverty. Also see Reynolds, Temple, Robertson, & Mann, 2001). Gorey notes however that preschool programs like Head Start are generally placed at the low end of a continuum in terms of the amount of preschool intervention and his findings suggest that both short- and long-term benefits are associated primarily with the more intensive programs like the Perry Preschool and the Abecedarian Project. Hence, by extension, if Gorey is correct, the public benefits from tax dollars supporting preschool interventions (e.g., additional tax revenue, decreased social welfare

and related expenditures) are attributable to these more intensive programs, not to Head Start.

Further, in their study of Head Start programs in Nashville, TN Kaiser et al. (2000) underscore that the population of 259 three-year old children they examined is at elevated risk for behavior and language problems. To the extent Gorey (2001) and Kaiser et al. are correct, additional resources may be required for Head Start than might be the case for other preschool programs to obtain notable gains in social benefits. This is so because Head Start children face many initial cognitive, emotional, and to a lesser extent physical disadvantages than do other children and they may need far more intensive services than the broad array of social, parental, and medical services that Head Start already makes available to the families of program participants (Administration for Children and Families, 1998 & 1999; Lee, Schnur, & Brooks-Gunn, 1988).

In this study, I seek to assess the long-term merits of Head Start by providing evidence linking Head Start and other preschool programs with effects on several life success measures, notably income inequality, family poverty, and economic mobility. It should be borne in mind that Head Start began in 1965 as part of a larger anti-poverty effort of the Johnson Administration and that an ongoing objective of the program was to break the cycle of disadvantage poor children faced by leveling the academic playing field and thereby increasing the chances for these children to escape poverty (Beatty, 1993; Cravens, 1993; Zigler & Muenchow, 1992). In light of the contemporary climate of opinion reflected in the welfare reform legislation of 1996 and the Bush Administration proposals for renewal of that legislation, reliance on public assistance programs such as Temporary Assistance for Needy Families (TANF) is perceived as a public burden and efforts to reduce the expenditures for and use of such programs are seen as desirable outcomes of anti-poverty programs (Bush, 2002; *Working Toward Independence*, n.d.). Such standards, however, may be exceptionally high as social programs go. Nonetheless knowledge about such long-term outcomes can aid policymakers and others interested in the economic well-being of children in their deliberations about Head Start programming and funding. In doing so I control for a variety of personal, sociodemographic, and structural factors

that might also influence the economic well-being of the youth over the course of their life spans. In particular, I address the following questions:

1. To what extent do Head Start children vary from other preschool children and from children who never participated in any preschool programs in regard to life success and other background and risk measures?
2. To what extent does Head Start participation affect income inequality, family poverty, economic mobility, and use of public assistance programs when controlling for background, risk, and other factors?

Answers to such questions will enable policymakers and others interested in the well-being of children to make more informed decisions about promoting expansion of preschool education in general and Head Start in particular at public expense.

Methods

Data

Data for the study were obtained from the National Longitudinal Survey of Youth (NLSY79), a representative sample of 12,686 noninstitutionalized youth in the U.S. aged 14 to 21 as of December 31, 1978. Respondents were interviewed annually between 1979 and 1994, again in 1996 and in 1998. For the 1998 survey, the most recent available at the time of this study, 8,399 respondents were interviewed, a 66.2% unweighted retention rate (79.0% weighted).

Respondents in 1998 differed on several sociodemographic measures from those in 1979, with the major difference in average adjusted family income ($13,598 vs. $9,788). In 1979 they were also on average slightly younger (17.6 vs. 17.9 years old), less educated (10.3 vs. 10.5 years of schooling), from larger families (4.70 vs. 4.26 members), with proportionately more blacks (14.3% vs. 13.6%, weighted) and proportionately more women (51.4% vs. 49.2%, weighted). The attrition of lower income youth is in part offset by the over sampling of them in the earlier survey years and by the use of a weighted measure when showing percentage distributions of characteristics of the sample. The data are well suited

for the present study because the same individuals are surveyed over a twenty-year period, thereby allowing the construction and use of cumulative indices of life success measures in addition to other relevant family background personal, social, and structural measures.

The study sample comprises 5,621 youth who reported all relevant information except as noted below where mean values of appropriate race/ethnicity/sex categories were used for missing ordinal and interval level data. Results and recommendations are made with the differences between the original and most recently available samples of the youth cohort in mind. Further documentation about the national sample can be found in the *NLS Handbook 2000* (Center for Human Resource Research, 2000) and the *NLSY79 User's Guide 1999* (Center for Human Resource Research, 1999).

Measures

Respondents are categorized into three preschool program participation groups, Head Start participants, other preschool program participants, and non-preschoolers. The five life success or outcome measures in this study are number of years youth reported that they lived in poor families, received TANF/AFDC, and Food Stamps, average annual income-to-poverty ratios, and economic mobility between 1985 and 1998. Survey year 1985 was chosen as the start year because that was the first year all youth were eligible to answer questions about home ownership or rental, signifying that they were considered old enough to form their own households. The income-to-poverty ratio is a function of respondents' reported family income and the annually adjusted U.S. poverty thresholds that take into account family size. Economic mobility reflects the average change in respondents' income-to-poverty ratios rank ordered by deciles between 1985 and 1998. The permissible values of economic mobility range from a low of –9 to a high of +9. Respondents who reported $0.00 family income are assigned an annual nominal income of $1.00. For respondents who had missing values for annual family income, means by race/ethnicity and sex were assigned.

Background measures include a variety of personal, familial, and structural indices. Whether or not respondents' mothers

completed high school (coded 1=yes, 0=no) serves as a proxy for the socio-economic status of the youths' families during their preschool years (Committee on Economic Development, 2002). Family structure when respondents were 14 years of age is included because family structure during childhood and adolescence has been shown to affect children's educational attainment, which in turn impacts the likelihood and duration of poverty, use of public assistance, and other life success measures (e.g., see Garasky, 1995). Family structure, which refers to the type of family respondents lived in when they were 14 years of age, is captured by three dummy variables (each coded 1=yes, 0=no): two-biological parent family, two non-biological parent family, and single-parent family. Youth who were either expelled or suspended from school (coded 1=expelled/suspended, 0=not) is used to identify and control for behavior signifying difficulty they may have had with educational attainment.

Two common psychological measures, mastery over one's environment and self-esteem, found in the NLSY79 and thought to influence life success, are used primarily as controls. The Pearlin Mastery Scale captures a sense of mastery or control over one's life (Pearlin, Lieberman, Menaghan, & Mullan, 1981). There is evidence that psychosocial factors like sense of powerlessness and perceptions of mastery affect one's well-being (e.g., see Kessler, House, Anspach, & Williams, 1995). The Pearlin Mastery Scale was administered 1992, with higher scores signifying a greater sense of mastery. The Rosenberg Self-Esteem Scale, administered in 1980 and 1987, measures the self-evaluation of self-esteem that an individual makes and customarily maintains (Rosenberg, 1965). Summaries of the items that constitute each scale, their validity and reliability, and scoring can be found in Center for Human Resource Research (1999).

Finally, a variety of personal, social, and structural cumulative indices thought to influence life success are used as control measures. These are: whether or not respondents were born in the U.S. (coded 1=yes, 0=no) and whether or not respondents lived in an urban environment at age 14 (coded 1=yes, 0=no); whether or not respondents were ever suspended or expelled from school (coded 1=yes, 0=no), respondents' economic mobility and income-to-poverty ratios, and the number of years respondents lived in poor

families prior to 1985; the number of years respondents were out of the labor force between 1985 and 1998; and the average unemployment rate of their area of residence, the number of years respondents lived in center cities, and were married throughout the entire study period. Finally, race and sex are coded as six dummy variables signifying Hispanic, non-Hispanic black, and non-Hispanic white males and females.

Procedures

Pearson's correlation is used to determine the associations among the life success indices and thereby assess the extent to which they are statistically independent of one another and, by extension, theoretically distinct. ANOVAs and chi-square analyses are used to obtain bivariate descriptive information on life success indices and other predictor measures by preprogram participation group. When an ANOVA test is significant, the Duncan post hoc statistic is used to show the rank order of the measures by preprogram participation group. Multiple regression analysis is used to assess the effects of preschool programs on life success measures when controlling for the other predictor measures. Because of theoretical and/or practical significance, separate models are used for each of the five life success measures. In each model, non-preschoolers constitute the reference category preprogram participation group.

Limitations

This study relies on one cohort of youth who were representative of the population 14 to 21 years of age as of December 31, 1978. Hence, the population sample is not representative of the general U.S. population at that time, nor does it represent other cohorts of youth. Generalization of results is thereby compromised. Further, there were no measures available in the data files in regard to the socio-economic circumstances of the youth while they were of preschool age. As noted, whether or not mothers of the youths completed high school serves as a proxy for the socio-economic status of the families while the youth were of preschool age. Further, there were no measures about specific aspects of either Head Start or other preschool programs. Hence, there was no way to control for variation in program quality and services, a

subject better suited for future research that relies on different data and methods than those used here. Discussion of results and conclusions are made with these limitations in mind. Despite these limitations, this study adds to the body of knowledge about longer-term effects of Head Start and other preschool programs on children who participate in them.

Results

Of the five life success measures, the number of years respondents lived in families that received TANF/AFDC and that received Food Stamps were the most strongly correlated ($r = .86$), suggesting that one measure could serve as a proxy for the other and theoretically signifying the reliance of low-income families on public assistance. Although the TANF/AFDC and Food Stamps are statistically correlated, they are nonetheless distinct programs warranting separate consideration as outcome measures, with Food Stamps having the broader socioeconomic constituency of users and greater longstanding bipartisan support. Other associations among life success measures were moderate to weak: the number of years respondents lived in families that received Food Stamps and average income-to-poverty ratios ($r = -.46$), the number of years respondents lived in families that received TANF/AFDC and average income-to-poverty ratios ($r = -.37$), the number of years respondents lived in families that received Food Stamps and the number of years they lived in poverty ($r = .34$), average income-to-poverty ratios and the number of years they lived in poverty ($r = -.30$), the number of years respondents lived in families that received TANF/AFDC and the number of years they lived in years of poverty ($r = .29$), the number of years respondents lived in families that received TANF/AFDC and economic mobility ($r = .15$), the number of years respondents lived in families that received Food Stamps and economic mobility ($r = .15$), years of poverty and economic mobility ($r = -.13$), and average income-to-poverty ratios and economic mobility ($r = .05$).

Of the 5,521 youth in the study sample, 735 (7.0% weighted—hereafter, all percents are weighted according to the 1998 sample) were Head Start participants, while 928 (17.4%) attended other preschools. On most of the nominal level measures, Head

Starters differed significantly from both other preschoolers and non-preschoolers. Of the three preschool program participation groups, Head Starters were much less likely to have mothers who completed high school, 48.2% vs. 79.9% for other preschoolers and 66.7% for non-preschoolers, signifying the relative socio-economic disadvantage of this group while the youth were of preschool age. Head Starters were also less likely to be living with both biological parents at age 14, 55.2% vs. 76.4% for other preschoolers and 77.9% for non-preschoolers and they were more likely to be living in single-parent families, 29.7% vs. 15.5% for preschoolers and 10.0% for non-preschoolers. Head Starters were more likely to be black female and black male, 29.0% and 22.9% respectively vs. 06.6% and 06.4% for other preschoolers and 04.8% and 04.6% for non-preschoolers. They were also more likely to have been expelled or suspended from school, 27.9% vs. 17.0% for other preschoolers, and 21.0% for non-preschoolers. Finally Head Starters were roughly as likely to have been born in the U.S. (97.7%) and living in an urban environment at age 14 (77.8%) as were other preschoolers and non-preschoolers.

On eleven of seventeen ordinal and interval level measures, Head Starters were significantly different from other preschoolers and non-preschoolers. As Table 1 indicates, Head Starters differed from preschoolers and non-preschoolers on four of the five outcome measures. Between 1985 and 1998 Head Starters lived in poor families longer (0.20 years) and received TANF/AFDC and Food Stamps longer (1.33 & 2.10 years respectively) vs. 0.12, 0.56, & 0.92 years respectively for preschoolers and 0.14, 0.74, & 1.14 years respectively for non-preschoolers. They also had the lowest income to poverty ratios between 1985 and 1998, 2.6 vs. 3.3 for non-preschoolers and 3.8 for other preschoolers. In regard to economic mobility between 1985 and 1998, both Head Starters and other preschoolers had statistically similar and greater upward mobility (0.67 and 0.51 deciles respectively) than did non-preschoolers (0.16 deciles).

Head Starters also differed from preschoolers and non-preschoolers on one of two background measures, one of three psychological measures, and four of seven cumulative/structural measures. Head Starters were on average younger (35.5 years old in 1998) than other preschoolers and non-preschoolers (roughly

Table 1

Ordinal and Interval Level Study Measures by Preschool Program Participation, Means, ANOVA & Duncan Post Hoc Results

Measures	*Head Start Participants (N = 735)*	*Other Preschoolers (N = 928)*	*Non-preschoolers (N = 3958)*	*F-value*	*Duncan Post Hoc*
Life Success / Outcome					
Economic mobility	00.67	00.51	00.16	008.81***	Head Starters, Other preschool > No preschool
Income-to-poverty ratio	02.57	03.79	03.32	100.23***	Other preschool > No preschool > Head Starters
Yrs. received food stamps	02.10	00.92	01.14	040.26***	Head Starters > No preschool, Other preschool
Yrs. received TANF/AFDC	01.33	00.56	00.74	023.46***	Head Starters > No preschool, Other preschool
Yrs. lived in poverty	00.20	00.12	00.14	007.47***	Head Starters > Other preschool, No preschool

Measures	*Head Start Participants (N = 735)*	*Other Preschoolers (N = 928)*	*Non-preschoolers (N = 3958)*	*F-value*	*Duncan Post Hoc*
Background					
Age of respondent	35.53	37.13	37.05	164.55***	Other preschool, No preschool > Head Starters
Highest grade completed—respondent	13.04	14.07	13.22	055.20***	Other preschool > No preschool, Head Starters
Psychological					
Mastery	22.17	22.42	22.14	003.04*	Other preschool > No preschool, Head Starters
Self-esteem 1980	32.16	32.93	32.32	010.05***	Other preschool > No preschool, Head Starters
Self-esteem 1987	33.11	34.03	33.55	010.73***	Other preschool > No preschool > Head Starters
Other Cumulative/Structural					
Economic mobility—1978–84	00.20	–00.19	–00.13	003.68*	Head Starters > Other preschool, No preschool

Measures	*Head Start Participants (N = 735)*	*Other Preschoolers (N = 928)*	*Non-preschoolers (N = 3958)*	*F-value*	*Duncan Post Hoc*
Income-to-poverty ratio—1978–84	01.79	03.02	02.73	187.36***	Other preschool > No preschool > Head Starters
Unemployment rate	02.98	02.87	03.03	023.40***	No preschool, Head Starters > Other preschool
Yrs lived in center city—1979–98	03.61	03.38	02.47	029.52***	Head Starters, Other preschool > No preschool
Yrs. lived in poverty—1978–84	02.04	00.94	01.04	108.31***	Head Starters > No preschool, Other preschool
Yrs. married—1979–98	05.37	06.82	08.00	071.97***	No preschool > Other preschool > Head Starters
Yrs out of the labor force—1985–98	114.33	87.04	95.37	008.95***	Head Starters > No preschool, Other preschool

Note: Duncan Post Hoc Test results are significant at .05 or below.
***p > .001, *p > .05.

37.1 years each). They also had the lowest levels of self-esteem measured in 1987, 33.1 on the Rosenberg Self-Esteem scale, vs. 33.5 for non-preschoolers and 34.0 for other preschoolers and the fewest years married, 5.4 years vs. 6.8 for other preschoolers and 8.0 for non-preschoolers. Head Starters spent more time in poverty (2.04 years) between 1978 and 1984 and more time out of the labor force (114 weeks per year) between 1985 and 1998 than either other preschoolers or non-preschoolers, yet they were the only group characterized by upward economic mobility between 1978 and 1984 (0.20 deciles), invariably a function of their having the lowest average income-to-poverty ratios during the same period (1.79).

On one structural measure, number of years they lived in center cities, Head Starters were indistinguishable from other preschoolers (3.6 and 3.4 years respectively), while both differed from non-preschoolers (2.5 years). On the three remaining measures, Head Starters were indistinguishable from non-preschoolers. They were comparably educated, having completed a bit more than 13 years of schooling vs. 14.1 for preschoolers. Head Starters and non-preschoolers had comparably lower levels of mastery, 22.1 each on the Pearlin Mastery Scale vs. 22.4 for preschoolers and self-esteem measured in 1980, 32.1 and 32.4 on the Rosenberg Self-Esteem scale, vs. 32.9 for preschoolers.

As can be seen in Table 2, of the five regression models, the study measures accounted for the greatest variance in the average income-to-poverty model (Adjusted before each R^2 = .53), followed by the Food Stamp model (Adjusted before each R^2 = .41), TANF/AFDC model (Adjusted before each R^2 = .35), economic mobility model (Adjusted before each R^2 = .22), and the family poverty model (Adjusted before each R^2 = .12). Preschool program participation was found significant only in the average income-to-poverty model. Youth who had participated in preschool programs other than Head Start were more likely than non-preschoolers to have higher average annual income-to-poverty ratios.

The relative influence of preschool participation on the average annual income-to-poverty ratio between 1985 and 1998 (Beta = 0.02), however, was dwarfed by other measures, particularly the average annual income-to-poverty ratio of the early adolescent,

Table 2

Regression Results: Standardized Coefficients by Life Success Measures

	Models of Life Success Measures				
Measures	*Income-to-poverty ratio*	*Economic mobility*	*Years received food stamps*	*Years received AFDC/TANF*	*Years lived in poverty*
Preschool Program Participation					
Head Start	0.01	0.02	0.01	–0.00	–0.01
Other preschool	0.02*	0.02	0.00	–0.01	–0.00
No preschool	Reference	Reference	Reference	Reference	Reference
Background					
Age of respondent	–0.01	–0.03*	0.04***	0.04***	0.03*
Highest grade completed—respondent	0.26***	0.12***	–0.14***	–0.09***	–0.09***
High school grad—respondent's mother	0.02*	–0.45**	–0.02	–0.00	–0.02
Family structure at age 14					
Two-biological-parent family	Reference	Reference	Reference	Reference	Reference
Two-non-biological-parent family	–0.01	0.04**	0.02	0.02	–0.00
Single-parent family	0.00	0.08***	–0.00	0.01	–0.00
Race/ethnicity/sex					
White male	Reference	Reference	Reference	Reference	Reference
Black male	–0.05***	0.02	–0.10***	–0.12***	0.01
Hispanic male	–0.03**	0.01	–0.03**	–0.04**	–0.00
White female	–0.01	–0.03	–0.02	–0.01	–0.02
Black female	–0.05***	0.02	0.16***	0.15***	0.06***
Hispanic female	–0.04***	0.04**	0.03**	0.03*	–0.02

Measures	Models of Life Success Measures				
	Income-to-poverty ratio	*Economic mobility*	*Years received food stamps*	*Years received AFDC/TANF*	*Years lived in poverty*
School behavior	–0.03**	0.00	0.05***	–0.05***	0.03*
Urban environment at age 14	0.02*	–0.02	–0.00	–0.00	–0.00
US born	–0.02*	0.01	0.04***	0.02	0.00
Psychological					
Mastery	0.07***	0.04**	–0.05***	–0.02	–0.03*
Self-esteem 1980	0.02	–0.02	–0.00	0.01	0.00
Self-esteem 1987	0.08***	0.03*	–0.03*	–0.03*	-0.05**
Other Control/Cumulative/Structural					
Economic mobility—1978–84	—	–0.44***	—	—	—
Income-to-poverty ratio—1978–84	0.37***	—		—	
Unemployment rate	–0.08***	-0.00	0.08***	0.07***	0.03*
Yrs. lived in center city—1979–98	0.00	–0.01	0.05***	0.03*	0.03*
Yrs. lived in poverty—1978–84	—	—	0.18***	0.15***	0.07***
Yrs. married—1979–98	0.04***	0.06***	–0.13***	–0.18***	–0.10
Yrs. out of the labor force—1985–98	–0.16***	0.04**	0.35***	0.36***	0.21***
Adjusted R^2	0.53	0.22	0.41	0.35	0.12

*** $p > .001$, ** $p < .01$, * $p < .05$.

1978–1984 period (Beta = 0.37) and the highest grade completed by the youth (Beta = 0.26). Higher levels of income relative to the poverty thresholds during early adolescence, as well as of educational attainment, were good predictors of relatively high levels of income relative to the poverty thresholds between 1985 and 1998. Time out of the labor force had a strong negative relationship with average annual income-to-poverty ratio (Beta = –0.16). All race/ethnicity/sex groups except white females had lower average annual income-to-poverty ratios than white males between 1985 and 1998. Their relative influence was modest compared to the average annual income-to-poverty ratio of the early adolescent, 1978–1984 period, highest grade completed by the youth, and time out of the labor force. Average annual unemployment rate in the area of residence, a structural measure, also had a moderate inverse relationship with the average annual income-to-poverty ratio, while two psychological measures, namely mastery and self-esteem in 1987, had relatively modest positive relationships (Beta = 0.07 & 0.08 respectively).

As noted, preschool program participation accounted for no variance in life success measures beyond that of other indices in any of the four other regression models. Time spent out of the labor force had the greatest relative, positive, influence on the number of years the youth lived in families that received Food Stamps (Beta = 0.35), TANF/AFDC (Beta = 0.36), and that were poor (Beta = 0.21). Living in poor families between 1978 and 1985 also increased the time spent in families receiving Food Stamps (Beta = 0.18) and TANF/AFDC (Beta = 0.15), and to a lesser degree, living in poor families between 1985 and 1998 (Beta = 0.07). Economic mobility in early adolescence had a strong inverse relationship with economic mobility between 1985 and 1998 (Beta = –0.44), suggesting that some youth whose families were upwardly mobile during their childhood and early adolescence were downwardly mobile as they entered the workforce, formed their own families and households. The reverse was the case during later adolescence and young adulthood for other youth whose families were downwardly mobile during their childhood and early adolescence.

Compared to white males, black males and to a lesser degree Hispanic males spent fewer years receiving Food Stamps (Beta

= –0.10 & –0.03 respectively) and receiving TANF/AFDC (Beta = –0.12 & –0.04 respectively) between 1985 and 1998. Black females and to a lesser degree Hispanic females spent more time receiving Food Stamps (Beta = 0.16 & 0.03 respectively) and receiving TANF/AFDC (Beta = 0.15 &-0.04 respectively). Both mastery and self-esteem in 1987 had modest positive relationships with economic mobility (Beta = 0.04 and 0.03 respectively) and modest negative relationships with receipt of Food Stamps (Beta = –0.05 and –0.03 respectively) and year living in poor families (Beta = –0.03 and –0.05 respectively). Living in center cities had a relatively modest positive relationship with receipt of Food Stamps (Beta = –0.05), receipt of TANF/AFDC (Beta = 0.03), and living in poor families (Beta = –0.03).

Discussion

Results show that preschool program participation affected only one of five life success indices used in this study when controlling for a variety of personal, social, structural, and other cumulative measures. Participation in preschool programs other than Head Start increases the economic well-being of the youth as measured by their families' income-to-poverty ratios when compared to those who never attended preschool. This finding suggests either that preschool programs are doing something right that benefits their graduates more so than whatever benefits accrue to Head Starters, or that those who attend preschool programs begin with advantages that are well above those of Head Starters and that continue to serve them well through later adolescence and young adulthood, or both. Gorey's (2001) meta-analysis of research studies of preschool programs published in the 1990s suggests that preschool programs like Head Start are generally placed at the low end of a continuum in terms of the amount of preschool intervention and that both short- and long-term benefits are associated primarily with the other types of preschool programs many of which are more intensive than Head Start.

As noted, there are no measures of preschool program quality in the NLSY79 data files, so there is no way to determine if preschoolers received more intensive educational experiences

than did Head Starters. Results of this study nonetheless indicate that these other preschoolers start out with greater advantages than do Head Starters, indicated by the higher percentage of mothers having completed high school, even more so than the mothers of non-preschoolers. Although higher income-to-poverty ratios for the preschoolers may be due in part to the early socio-economic and other advantages they are likely to bring to the programs, it is plausible to infer that many parents of other preschoolers can and do send their children to more intensive programs than are available to lower income families. Further, the finding holds when controlling for whether or not mothers' completed high school, suggesting that the preschool experience contributes something beyond the early socio-economic and other advantages they are likely to bring to the programs. As noted previously, however, establishing a more direct empirical link regarding program intensity per se and economic well-being goes beyond the scope of this study and is a subject for future research that uses different data and methods than those relied upon here. To the extent that Head Starters are at a greater disadvantage than other preschoolers and non-preschoolers, as several bivariate findings of this study suggest (e.g., greater likelihood of residing in single-parent families at age 14, spending more years living with families whose income falls below official poverty thresholds), then modifications in Head Start are warranted to ensure a more even playing field so Head Start graduates can achieve roughly comparable income-to-poverty ratios throughout their young adult lives.

The findings of non-statistical significance of preschool program participation in regard to the other life success indices should not be interpreted as having no discernable effect. On the contrary, to the extent that Head Starters are at a greater disadvantage than other preschoolers and non-preschoolers, as findings of this study and previous research (e.g., Caputo, 1998; Kaiser et al., 2000) suggest, then the multivariate findings of this study show that they do as well as other preschoolers and non-preschoolers in regard to economic mobility, number of years the youth lived in poor families, and the number of years they lived in families that received Food Stamps and TANF/AFDC. In essence, when controlling for a variety of personal, social, structural, and other

cumulative factors, preschool program participation overcomes obstacles to economic well-being over the life span associated with such disadvantages as persistent childhood poverty and behavioral problems. Although initially disadvantaged, Head Start graduates are to some degree mainstreamed, such that they fare no better or worse than other preschoolers and non-preschoolers in regard to economic mobility, number of years the youth lived in poor families, and number of years they lived in families that received Food Stamps and TANF/AFDC.

Although this study focused on the effect of preschool program participation on life success indices, the influence of cumulative measures during the period of early adolescence, that is, from 1978 through 1985 when significant numbers of youth were deemed ineligible to be asked if they owned or rented the home or apartment in which they lived, should be noted because it appears to be highly determinative. Early adolescent poverty for example is a strong relative determinant of poverty in later life, as well as of receipt of Food Stamps and TANF/AFDC. And a family's income-to-poverty ratio during a youth's early adolescence is a strong determinant of one's income-to-poverty ratio later in life, while economic mobility during a youth's early adolescence is a strong determinant, albeit inverse, of economic mobility in later life. This last finding might be less paradoxical than initially thought, inviting some speculation. Children from upwardly mobile families may have lower family incomes as they form their own families and households. They are just starting out in their careers and may be experimenting with a variety of jobs before settling into a steady career track. On the other hand, the opposite might be the case for children from downwardly mobile families. Having experienced downward mobility, these children might be more prone to settle into an upwardly mobile career path. Testing such theories is beyond the scope of this study, but is a viable topic for future research. On the whole, findings about the influence of cumulative measures suggest that one's socioeconomic condition during early adolescence sets a trajectory of economic well-being as one begins building one's career by participating in the labor force and forming his/her own family. Further research is needed to determine the nature of appropriate interventions during early adolescence needed to

increase the opportunity for low-income youth to spend less of their maturing and adult lives in poverty and as recipients of public assistance. The relative robust positive association between education and each of the five life success measures used in this study suggests the merits of efforts increasing public and private investments in education to ensure that greater proportions of adolescents complete both high school and college.

Finally, it should also be noted that more time spent married is positively associated with higher income-to-poverty ratios and to economic mobility, and inversely related to number of years in poor families and as recipients of Food Stamps and TANF/AFDC. Given that TANF/AFDC targets primarily single-parent families, this last finding is no surprise. Findings related to the other life success measures, however, show that marriage has socioeconomic benefits, given the potential of pooling spousal with other family members' resources, and suggest a reason why legislators and many others extolled the virtues of marriage in 1996 when they successfully sought to end the federal guarantee of money to states to support poor single-parent families and why the Bush Administration promotes marriage among his proposals to renew that legislation (Bush, 2002). Married people fare better economically and they are apt to demand less of public assistance programs targeted toward low-income individuals.

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